

From: "Zhen, Davis"
To: younghs@cdmsmith.com
CC: "Sheldrake, Sean" <sheldrake.sean@epa.gov>
"Scott Coffey" <coffeyse@cdmsmith.com>
"Vickstrom, Kyle E." <vickstromke@cdmsmith.com>
Date: 7/26/2018 6:46:38 AM
Subject: Re: Core storage challenges
Attachments: [image002.jpg](#)

Thank you Howard for the clarifications.

Thanks,

Sent from my iPhone, please excuse typos

Davis Zhen, Manager
Site Cleanup Unit 2
Office of Environmental Cleanup
[1200 Sixth Avenue Suite 155](#)
M/S ECL – 122, [Seattle, WA 98101](#)
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On Jul 25, 2018, at 4:59 PM, Young, Howard S. <younghs@cdmsmith.com> wrote:

Sean and Davis,

Prior to the Pre-RD Group taking corrective action yesterday, the cores were not being collected in compliance with the FSP. As we communicated to you and you stated in your email, the upper 1.5 to 2 feet of the core (shallowest interval) was not on ice and was exposed to sun and the heat of the day (see attached photos). Therefore, we would like to clarify that the upper 1.5 to 2 feet of those core samples were not collected in compliance with the FSP to be "stored upright with ice." Samples collected from these intervals for chemical analysis should be flagged as potentially compromised samples.

Howard S. Young, LG | CDM Smith
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From: Tyrrell, Ken <ken.tyrrell@aecom.com>
Sent: Wednesday, July 25, 2018 11:14 AM
To: Zhen, Davis <Zhen.Davis@epa.gov>
Cc: Coffey, Scott <CoffeySE@cdmsmith.com>; Young, Howard S. <younghs@cdmsmith.com>; Vickstrom, Kyle E. <vickstromke@cdmsmith.com>
Subject: RE: Core storage challenges

Davis,

We are in receipt of your email below about the temporary storage of cores on the vessels and offer this in response.

In the spirit of ensuring the collection of scientifically valid data we have used your email as a prompt to review core storage on the vessels and have made the following adjustments:

- A mid-day delivery of cores to the processing facility, from the dock, has been instituted to get the cores into a more stable environment in an expedited manner,
- Once delivered to the processing facility the upright cores are transferred to a commercial grade refrigerator that keeps the cores at a constant temperature at about 2-degrees Celsius (as a reminder the cores are processed within 24-hours),
- The core storage process on the vessels has been modified to include placing the cores into a larger diameter tube, extending the outer tube with a slip coupling (see attached picture), and filling the annulus with ice (see attached picture),

We offer the observation that the previous core storage on the vessels has been in compliance with the Field Sampling Plan (FSP). Here's an extract from the FSP (page 13) of the relevant text about core storage:

<image002.jpg>

We do appreciate the EPA's concern and prompt suggestions about methodologies to improve the sampling program. We feel this response adequately addresses the items in your email and reinforces the samples collected to date were collected in compliance with the FSP.

Ken Tyrrell

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From: Zhen, Davis [<mailto:Zhen.Davis@epa.gov>]

Sent: Tuesday, July 24, 2018 11:03 AM

To: Tyrrell, Ken <ken.tyrrell@aecom.com>

Cc: Scott Coffey <coffeyse@cdmsmith.com>; younghs@cdmsmith.com; vickstromke@cdmsmith.com

Subject: Core storage challenges

Ken,

Our field oversight staff have observed core storage on the research vessel that is not following FSP requirements and have notified the field supervisor of this on 7/23 and 7/24. The FSP calls for sectioning of the sediment cores into manageable 4 to 6 foot lengths and storing them on ice. The alternative method that the crews are currently implementing is leaving 1.5 to 2 feet of the core out of the ice. EPA notes this as a data quality issue and is flagging these cores as potentially compromised. Please take measures to have the field crews implement the requirements for the FSP and section the cores and place them on ice.

Thanks,

Sent from my iPhone, please excuse typos

Davis Zhen, Manager

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<core storage 1.jpg>

<Core storage 2.jpg>